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## **SITE SUMMARY AND RECOMMENDATIONS**

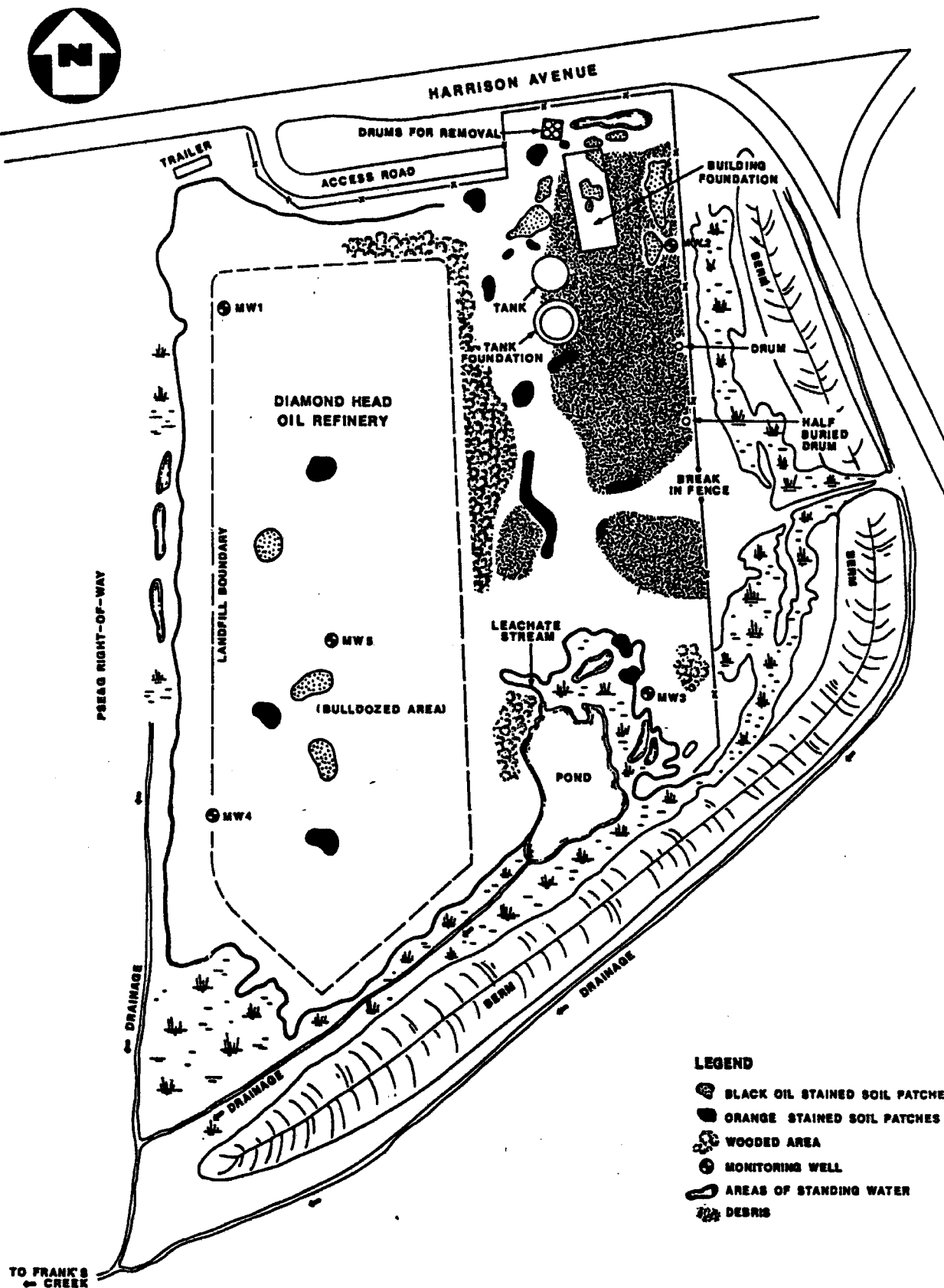
The Diamond Head Oil Refinery Div. (Diamond Head) Site is located at 1401 Harrison Avenue in Kearny, Hudson County, New Jersey. The site is also listed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Alias Site Listing as Edgewater Terminal (Ref. No. 1). Figures 1 and 2 present a Site Location Map and Site Map, respectively. Currently the site is inactive and consists of approximately 15 acres of undeveloped land that is bordered by Harrison Avenue to the north, entrance ramp M of Interstate 280 to the east, Interstate 280 (I-280) to the south, and the Campbell Distribution Foundry to the west (Ref. No. 9). The site is completely fenced, with the exception of a break in the fence along the eastern border, and the access road is blocked at Harrison Avenue by a dirt berm and concrete debris (Ref. No. 12). The site is comprised of wetland areas and drainage ditches, a small pond, a vegetated landfill area along the western portion of the site, and the remnants of the former Diamond Head Oil Refinery on the eastern portion. The abandoned refinery portion of the site now contains various construction debris including the concrete foundations of the former on-site building and two former aboveground storage tanks (Ref. No. 9).

The site was in operation from February 1, 1946 to early 1979. The Diamond Head Oil Refining Company, Inc. operated an oil reprocessing facility at the site from 1946 until November 1, 1973. From 1973 until November 3, 1976, PSC Resources, Inc., a subsidiary of the Phillips Screw Company, Inc., continued to operate the reprocessing facility on the site under the name Diamond Head Oil Refining Company, Inc., Division of PSC Resources, Inc. In 1976 the facility was purchased by Ag-Met Oil Service, Inc. which continued the collection, refining, and recycling of liquid oily waste into fuel oil and lubrication oil. On November 18, 1976, Ag-Met Oil Service, Inc. changed its name to Newtown Refining Corporation and was issued a one-year NJDEP Temporary Operating Authorization (TOA) to operate a Special Waste Facility under the name Diamond Head Oil Refinery Division as a waste oil reprocessor on the Diamond Head site. Sometime in 1982, Newtown Refining Corporation became a wholly-owned subsidiary of Refinement International Company. The name of the facility remained Diamond Head Oil Refining Division and the expiration date on the TOA was April 30, 1979 or when engineering designs for the facility were submitted and approved or denied (Ref. Nos. 4, 6, 30, 32). It should be noted that all of the above named companies were owned by a Mr. Robert Mahler. In January 1985, Newtown Refining Corporation sold the site to Mimi Urban Development Corporation (Ref. No. 31). On August 23, 1985 Mimi Urban Development Corporation changed its name to Hudson Meadows Urban Renewal Development Corporation (HMURDC) and is the present owner of the site (Ref. No. 32).

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During facility operations, two aboveground storage tanks (conflicting reports of volumes of 30,000 gallons and 100,000 gallons) and possibly underground pits were used to store oily waste. These



**SITE MAP**  
**DIAMOND HEAD OIL REFINERY DIV., KEARNY, N.J.**  
NOT TO SCALE

**FIGURE 2**

wastes were intermittently discharged directly to adjacent properties, including the wetland area to the south of the site, creating an "oil lake." The New Jersey Department of Transportation (NJDOT) acquired the property to the south of the site on March 6, 1968. In 1977, NJDOT began construction of I-280 and was reported to have removed 9 million gallons of oil-contaminated water and 5 to 6 million cubic yards of oily sludge from the lake. This material was reportedly taken to Newtown's facility on Long Island to be recycled; however, there are no reports stating that this recycling process occurred. NJDOT filed suit against PSC Resources, Inc. on September 14, 1977 to recover the cost of the clean-up. It is also reported that during the construction of I-280, an "underground lake" of oil contaminated groundwater was found extending from the eastern limits of the NJDOT right-of-way to Frank's Creek on the west (Ref. Nos. 4, 25, 26). It is reported that, prior to abandoning the site, Diamond Head cleaned out the two aboveground tanks; however, there is no known documentation of this activity. From the close of operations in 1979 until 1982 the abandoned site was not completely fenced. During this time, it is reported that dumping of waste oils and other debris took place on site. Refinement International Co. hired Eastern Chemical Cleaning Co. to clean up the site in May 1982. In order to do so, the material in the tanks was analyzed and was found to contain 206 parts per million (ppm) of polychlorinated biphenyls (PCBs). Later analyses revealed levels of PCBs to be over 3,100 ppm. Approximately 7,500 gallons of material was pumped out of the tanks and disposed of off site by a Resource Conservation and Recovery Act (RCRA) permitted Treatment, Storage, and Disposal Facility (TSDF) by Resource Technology Service. Environmental Transport also removed approximately 27 tons of contaminated soil in May 1982. Analysis of a sample collected from this soil indicated the presence of lead at a concentration of 32 ppm. As of February 28, 1978, a reported \$13,600 in fines had been levied against Robert Mahler, the president of Diamond Head (Ref. Nos. 5, 22, 25). It is unknown if these fines were ever paid or if any other enforcement actions have taken place concerning the site.

Soil and groundwater in the area of the site have been impacted by past site operations. During the HALLIBURTON NUS Environmental Corporation on-site reconnaissance, carried out under the U.S. EPA Field Investigation Team (FIT) Contract, extensive areas of orange and black stained soil was observed to be present at various locations across the site. HALLIBURTON NUS Environmental Corporation conducted a sampling site inspection, under the FIT contract, at the facility on July 1 and 2, 1991, during which four groundwater, three surface water, three sediment, seven surface soil, one subsurface soil, three liquid waste, and two solid waste samples were collected. Analyses of the soil samples indicated the presence of significantly elevated concentrations of numerous volatile and semivolatile organic compounds, pesticides, PCBs, and metals in the areas of the stained soil and the oil lake. Results of the groundwater samples collected from the monitoring wells located in the eastern portion of the site, indicated the presence of volatile and semivolatile organics; and PCBs similar to those found in the soil and the sediment samples collected from the site. Visual observation of

samples collected from monitoring well 3 indicated that a layer of contamination was present on top of the groundwater in the well. Analytical results of samples collected from this layer of contamination indicate the presence of various contaminants not normally associated with petroleum products. Since groundwater in the area of the site is reported to flow in a westerly direction, no upgradient well was available to be sampled; therefore, a release of contaminants from the site to groundwater cannot be definitively concluded. Soil samples collected from the wetland area in the southern portion of the site indicate actual contamination of this wetland area by contaminants attributable to the site. Since the contaminants are present in surface soils on site and access to the site is not completely controlled (i.e., the break in the fence to the east), a potential for direct contact with on-site contaminants does exist; however, there is little potential for fire or explosion to occur at the site (Ref. Nos. 12, 34-37).

The site is located in the Hackensack Meadowlands, which act as a habitat for transient Federal and state listed endangered or threatened species. The Meadowlands also consist of numerous wetland areas which exist along the coastal tidal waters in the area of the site. There are no known wells used for drinking purposes within 4 miles of the site, nor are there any known drinking water intakes and fisheries located in any of the surface waters within 15 miles downstream of the site. There is no residence, school, or day care facility within 200 feet of the site property (Ref. Nos. 8, 17, 20, 33).

**HIGHER PRIORITY FOR FURTHER ACTION** is recommended for the Diamond Head Oil Refinery Div. Site. Contamination of an on-site wetland area by hazardous substances attributable to the site has been observed. Although groundwater under the site has been impacted by contaminants attributable to the facility's past operations, there are no known wells used for drinking purposes within 4 miles of the site. A release of contaminants from the facility to surface water is suspected; however, there are no fisheries within 15 miles downstream of the site. Since the site is located in the Hackensack Meadowlands, a release to air of these contaminants poses a threat to the habitats of Federal endangered or state threatened species and wetlands located within the Meadowlands. The elevated levels of contaminants in on-site surface soils, along with unrestricted site access, also pose a potential for direct contact with these contaminants.